

What is claimed is:

1. A pull-out resistant connector assembly for connecting a fluid supply tube to a fluid handling device, the assembly comprising:

5 a connecting nut having a proximal end and a distal end and having a first internal diameter extending longitudinally into said nut a first predetermined distance from the proximal end thereof, at which distance the internal diameter increases to a second, larger
10 diameter extending longitudinally a further, second predetermined distance into said nut, thereby forming at the diameter transition an internal projection having a circumferential sharp-edged ridge at said first distance, the nut being connectable to and over

15 an annular fitting having a proximal end and a distal end and having an internal bore therethrough and a longitudinally tapered external surface thereof, said fitting having at its proximal end an outside diameter such that said tube is slidable thereover, said fitting
20 tapering along its length from said outside diameter at its proximal end thereof to a larger outside diameter, this larger outside diameter extending a distance along the length thereof, at which distance the outside diameter decreases to a smaller diameter which extends
25 longitudinally a further predetermined distance along the

length of said fitting, thereby forming an external projection having a circumferential sharp-edged ridge around said fitting at said distance,

5 said nut adapted to receive a length of said fluid supply tube into and through its proximal end, wherein, upon connection of said assembly, said tube extends within said nut a distance beyond said first predetermined distance, beyond said internal projection in said nut, over the proximal end of said fitting, and
10 extends along and over said fitting a distance beyond said external circumferential projection thereof,

 said nut and said fitting compressing said tube therebetween upon connection and securing said supply tube thereat, the fitting adapted at its distal end to
15 connect said internal bore to an inlet port of said fluid handling device.

2. The assembly of claim 1 connecting a fluid supply tube to a nipped inlet of a fluid handling device.

20 3. The assembly of claim 1 wherein said nut and said fitting are connected by internal threads in the nut mating with external threads on the fitting.

4. The assembly of claim 1 wherein said projection in said nut is tooth-shaped in cross-section, angled distally, thereby providing a biting force resisting tube pull-out.

5 5. The assembly of claim 1 wherein said projection around said fitting is tooth-shaped in cross-section, angled distally, thereby providing a biting force resisting tube pull-out.

10 6. The assembly of claim 1 wherein said projection in said nut forms a right angle.

7. The assembly of claim 1 wherein said projection around said fitting forms a right angle.

15 8. The assembly of claim 1 wherein both the projection in said nut and the projection in said fitting are tooth-shaped in cross-section, and both are angled distally.

9. The assembly of claim 1 wherein said fluid supply tube is a plastic tube.

20 10. The assembly of claim 9 wherein said plastic tube is a fluoroelastomeric tube.

11. The assembly of claim 1 wherein said fluid is a gas.

12. The assembly of claim 11 wherein said fluid is air.

13. The assembly of claim 1 wherein said fluid is a liquid.

14. The assembly of claim 13 wherein said fluid is paint.

5 15. The assembly of claim 13 wherein said fluid is water.

16. The assembly of claim 13 wherein said fluid is a solvent.

10 17. The assembly of claim 1 wherein said fluid is a coating material.

18. The assembly of claim 17 wherein said coating material is a fluidized powder.

19. The assembly of claim 1 connected to a spray gun paint applicator.

15 20. The assembly of claim 1 connected to a rotary spray applicator.

21. The assembly of claim 1 connected to a robotically controlled fluid handling device.

20 22. The assembly of claim 21 connected to a robotically controlled spray gun.

23. The assembly of claim 21 connected to a robotically controlled rotary spray applicator.

25 24. The assembly of claim 21 connecting at least one fluid supply tube to spray apparatus for spray painting an automotive vehicle.

25. A plurality of the assemblies of claim 1 connecting a plurality of fluid supply tubes to selected inlets in apparatus for spray painting automotive vehicles.